Amendments to the Claims:

Please amend claim 1 as indicated below.

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A polarizing interference microscope comprising:

a light source;

a polarizer;

an analyzer;

an objective prism disposed between the polarizer and the analyzer and configured to produce a pair of sub-beams each having a respective different polarization; and

a birefringent compensation element disposed between the polarizer and analyzer and configured to compensate for a path length difference of the pair of sub-beams over a diameter of the objective prism;

wherein the microscope is free from a condenser prism.

Claim 2 (original): The polarizing interference microscope as recited in claim 1 wherein the polarizing interference microscope includes a transmitted-light microscope.

Claim 3 (original): The polarizing interference microscope as recited in claim 1 further comprising a semitransparent mirror and wherein the polarizing interference microscope includes an incident-light microscope.

Claim 4 (original): The polarizing interference microscope as recited in claim 1 wherein the birefringent compensation element is disposed in an immediate vicinity of the objective prism.

Claim 5 (original): The polarizing interference microscope as recited in claim 2 wherein the birefringent compensation element is disposed between the analyzer and the objective prism.

Claim 6 (original): The polarizing interference microscope as recited in claim 2 further comprising an objective and wherein the birefringent compensation element is disposed between the objective prism and the objective.

Claim 7 (original): The polarizing interference microscope as recited in claim 1 wherein the birefringent compensation element includes a liquid crystal matrix element.

Claim 8 (original): The polarizing interference microscope as recited in claim 2 wherein the birefringent compensation element includes a liquid crystal matrix element.

Claim 9 (original): The polarizing interference microscope as recited in claim 3 wherein the birefringent compensation element includes a liquid crystal matrix element.

Claim 10 (original): The polarizing interference microscope as recited in claim 4 wherein the birefringent compensation element includes a liquid crystal matrix element.

Claim 11 (original): The polarizing interference microscope as recited in claim 5 wherein the birefringent compensation element includes a liquid crystal matrix element.

Claim 12 (original): The polarizing interference microscope as recited in claim 6 wherein the birefringent compensation element includes a liquid crystal matrix element.